

REMARKS/ARGUMENTS

No claims have been amended. Claims 1, 3, 5-11, 13-19, 21, 23-29, 31, 33-44, 47-54, and 56-65 remain pending in the application. Applicants respectfully request reexamination and reconsideration of the application.

Claims 1, 3, 5-7, 19, 21, 23-25, 29, 37-39, 42, 47-50, and 56-65 were rejected under 35 USC §102(e) as anticipated by US Patent 6,232,669 to Khoury et al. ("Khoury"). In addition, claims 8-11, 13-18, 26-29, 31, 33-36, 40, 41, 43, 44, and 51-54 were rejected under 35 USC §103(a) as obvious in view of Khoury. Applicants respectfully traverse these rejections and request that they be withdrawn.

Independent claim 1 describes a "probe card assembly" that includes "a substrate configured to electrically contact [a] semiconductor tester apparatus." Probes for contacting a "semiconductor device under test" are located to a first side of the substrate. Such a probe card assembly passes test data (which may be test signals to be input into the semiconductor device and/or response signals generated by the semiconductor device) between the semiconductor tester and the semiconductor device under test. The probe card assembly of claim 1 also includes a "daughter card," which is located to a second side of the substrate. At least part of an electric circuit that "enhances test data" received at the probe card assembly is disposed on the daughter card. Khoury—which discloses a conventional probe card assembly and whose invention is directed to improved probes (e.g., 30 in Figure 9)—fails to teach or suggest several aspects of the probe card assembly of claim 1 of the instant application.

In the Office Action, Khoury's probe card 170 was equated with the substrate of claim 1; Khoury's interface assembly 140 was equated with the daughter card of claim 1; and Khoury's performance board 120 and capacitors 193 and 195 were equated with the electric circuit of claim 1. Even if the foregoing comparisons of Khoury to claim 1 of the instant application are accepted, Khoury still fails to teach or suggest the probe card assembly of claim 1 for several reasons.

First, no part of an electric circuit *that enhances test data* is located on the interface assembly 140 of Khoury. Capacitors 193 and 195 are located on the probe card 170—not the interface assembly 140. (See Khoury, Figure 3.) Moreover, Khoury's performance board 120—and indeed, all of Khoury's interface assembly 140—merely connect the printed circuit boards 150 with the probe card 170 and thereby provide conductive paths between the printed circuit

board 150 and the probe card 170 for test data; neither the performance board 120 nor any part of the interface assembly 140 processes or changes the test data. (See Khoury, e.g., col. 1, line 59 through col. 2, line 34; and col. 8, lines 51-67.) It should be noted that Khoury's column 3, lines 8-40 discusses the frequency response of electrical elements on Khoury's probe card 170—not electrical elements on the interface assembly 140. Because the performance board 120—and indeed the entire interface assembly 140—performs no processing or changing of test data but merely provides conductive paths for test data between the printed circuit boards 150 and the probe card 170, neither the performance board 120 nor anything in the interface assembly 140 is part of an electric circuit that enhances test data as required by claim 1 of the instant application. Therefore, Khoury fails to teach or suggest disposing any part of an electric circuit that enhances test data on the interface assembly 140. For this reason alone, claim 1 patentably distinguishes over Khoury.

Second, Khoury's capacitors 193 and 195 do not affect test data as required by claim 1 of the instant application. Capacitors 193 and 195 affect only the supply of power to the wafer 300; capacitors 193 and 195 do not have any affect whatsoever on test data, which as the name "test data" implies, is data involved in testing the wafer 300 (e.g., test signals to be input into the semiconductor device under test and/or response signals generated by the semiconductor device). (See Khoury col. 2, lines 59-61; and col. 3, lines 18-28.) Therefore, even Khoury's capacitors 193 and 195 are not part of an electric circuit that enhances test data. For this reason alone, claim 1 patentably distinguishes over Khoury.

Claims 3, 5-11, 13-18, 58, and 59 depend from claim 1 and therefore are also patentable over Khoury. Moreover, claims 3, 5-11, 13-18, 58, and 59 recite additional features that further distinguish over Khoury.

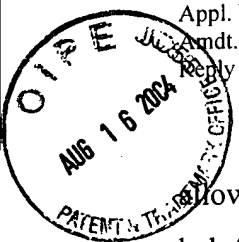
For example, claim 5 describes the electric circuit, at least a part of which is disposed on the daughter card, as "customizing at least a portion of [the] test data to the test needs of [the] semiconductor device under test." As discussed above, the performance board 120 does nothing more than pass test signals between the printed circuit boards 150 and the probe card 170; the performance board 120 does not customize any test signal. Moreover, as also discussed above, capacitors 193 and 195 merely remove noise and power surges from power supplied to the wafer 300; capacitors 193 and 195 do not affect—much less customize—test data. Therefore, claim 5 further distinguishes over Khoury.

As another example, claim 7 states that the test data includes response signals generated by the wafer 300, and claim 7 states that the electric circuit customizes at least part of the response signals generated by the wafer 300. As discussed above, the performance board 120 merely passes such signals between the printed circuit boards 150 and the probe card 170 without enhancing such signals, and capacitors 193 and 195 affect only power supplied to the wafer 300—not response signals generated by the wafer. Therefore, claim 7 further distinguishes over Khoury.

Claims 8-18, among other things, require multiple daughter cards, and claim 9 requires that the daughter cards be stacked. There is no suggestion or motivation—indeed, no reason at all—to use multiple interface assemblies 140 in Khoury. In fact, it is unclear how one would go about configuring Khoury's test apparatus to use multiple interface assemblies 140, and it is particularly unclear why or how one would stack multiple interface assemblies in Khoury. (See Khoury, e.g., Figure 2.) Therefore, claims 8-18 further distinguish over Khoury.

Claim 58 states that the electric circuit receives test data for testing a first number of semiconductor devices and enhances the test data by outputting test data for testing a greater number of semiconductor devices. Khoury is entirely silent regarding any such enhancement of test data. Therefore, claim 58 further distinguishes over Khoury.

Independent claims 19, 42, and 50 include features that are generally similar to the features discussed above with respect to claim 1. Therefore, independent claims 19, 42, and 50, as well as the claims that depend there from, also patentably distinguish over Khoury.



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In view of the foregoing, Applicants submit that the application is in condition for allowance. If the Examiner believes that a discussion with Applicants' attorney would be helpful, the Examiner is invited to contact the undersigned at (801) 323-5934.

Respectfully submitted,

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